

E 98

.I4 R2







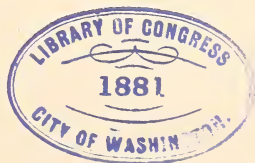


A DEPOSIT
OF
AGRICULTURAL FLINT IMPLEMENTS

FOUND
IN SOUTHERN ILLINOIS.

BY CHARLES RAU.

FROM THE ANNUAL REPORT OF THE SMITHSONIAN INSTITUTION,
WASHINGTON, D. C., FOR THE YEAR 1868.



WASHINGTON:
SMITHSONIAN INSTITUTION.
Nov., 1869.

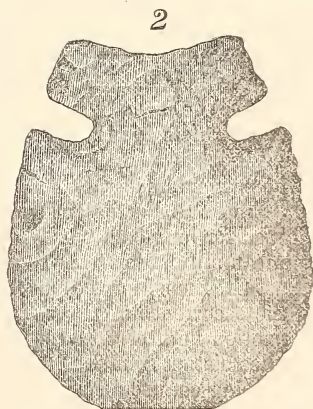
A DEPOSIT OF AGRICULTURAL FLINT-IMPLEMENTS IN SOUTHERN ILLINOIS.

BY CHARLES RAU.

In an article published in the Smithsonian report for 1863 I gave, for the first time, an account and drawings of certain North American flint implements of large size and superior workmanship, which were evidently used by the aborigines for cultivating the soil and other digging purposes, and hence, according to their shape, classified by me as *shovels* and *hoes*. The annexed figures represent both kinds of implements. I described the shovels (Fig. 1) as oval plates of flint, flat on one side and slightly convex on the other, the outline being chipped into a sharp edge. The specimen here figured measures above a foot in length, a little more than five inches in its greatest breadth, and is about three-quarters of an inch thick in the middle. Others are narrower and not quite as heavy. The shape of the hoes is illustrated by Fig. 2. This specimen is seven and a half inches long, nearly six inches wide, and about half an inch thick in the middle. The rounded part forms a sharp edge. The material of which these implements are made is a peculiar kind of bluish, gray or brownish flint, of slightly conchoidal fracture, and capable of splitting into large flat fragments. I never succeeded in discovering this stone *in situ*. The agricultural implements of my collection were all found in St. Clair county in southern Illinois, with the exception of one shovel, which was dug up in 1861 in St. Louis, during the construction of earthworks for the protection of the city. Both shovels and hoes were, doubtless, attached to handles, those of the latter probably forming a right, or even an acute angle with the stone blade, which is always provided with two notches in the upper part to facilitate the fastening.*

* I quoted a passage from *Du Pratz*, which is, perhaps, referable to the hoes. According to this author, the natives of Louisiana had invented a hoe, (*pioche*) with the aid of which they prepared the soil for the culture of maize. "These hoes," he says, "are shaped like a capital L; they cut with the edge of the lower part, which is entirely flat."—*Histoire de la Louisiane*, Paris, 1758. Vol. II, p. 176.

Plato XXI, in vol. II of *De Bry*, (Frankfort, 1591,) represents Florida Indians of both sexes engaged in field labor, the men using the hoe and the women sowing. The Latin text (by Le Moyne) accompanying the engraving states that the hoes are made of fish-bone, (*ligones e piscium ossibus*) and provided with wooden handles. The women sow beans and maize—"feminae fabas & milium sive Mayzum serunt."



Some of the shovels, like the specimen of which a drawing is given, measure a foot and more in length, and consequently are among the largest flint tools thus far discovered in any part of the world. Neither the rude hatchet-like and lanceolate implements found in the "drift" of France and England, associated with the osseous remains of the mammoth, the rhinoceros, and other animals of a bygone fauna, equal them in size; nor have, to my knowledge, the caves of the reindeer period in southern France and Belgium, once the resorts of savage hunting tribes, yielded any chipped flint articles of the same dimensions. Indeed, they are rivaled, as I think, only by the large flint celts of Scandinavia and northern Germany, which belong to a more advanced stage of the European stone age.

That the North American flint tools described by me were really used for digging can hardly be doubted. "If the shape of these implements," I stated in my account, "did not indicate their original use, the peculiar traces of wear which they exhibit would furnish almost conclusive evidence of the manner in which they have been employed; for that part with which the digging was done appears, notwithstanding the hardness of the material, perfectly smooth, as if glazed, and slightly striated in the direction in which the implement penetrated the ground." I further mentioned that this peculiar feature is common to all specimens of my collection as well as to the few which I have seen in the hands of others; and that they seem to be rather scarce, and merely confined to certain States bordering on the Mississippi river.

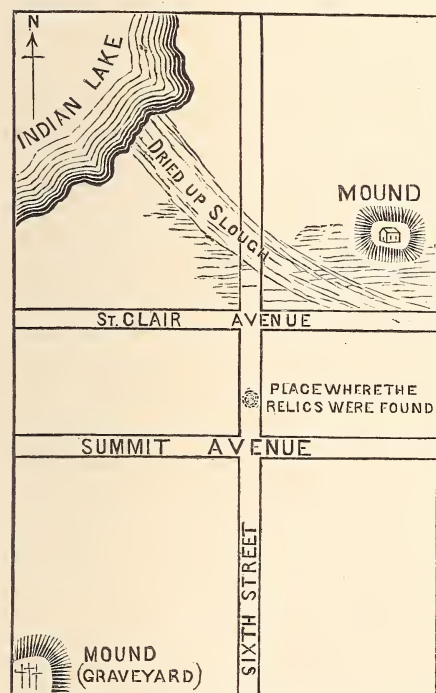
I was, therefore, much interested in the recent discovery of a large *deposit* of such implements at East St. Louis, (formerly Illinoistown,) in St. Clair county, Illinois, a place situated directly opposite the city of St. Louis, in the so-called "American Bottom," which forms a fertile plain extending for a considerable distance along the Mississippi shore in Illinois. This region, I must state, is very rich in Indian remains of various descriptions,* but particularly interesting on account of numerous artificial mounds, among which the celebrated truncated pyramid called Cahokia Mound, or Monk's Mound, is by far the most conspicuous, reminding the beholder of those gigantic structures in the valley of the Nile, which the rulers of Egypt have left to posterity as tokens of their power and their pride.

The particulars of the discovery to which I alluded were communicated to me by Dr. John J. R. Patrick, of Belleville, Illinois, a gentleman to whom I am greatly indebted for long-continued co-operation in my pursuits relative to the subject of American antiquities. As soon as Dr. Patrick heard of the discovery he hastened to East St. Louis, for the purpose of ascertaining on the spot all details concerning the occurrence of those flint tools; and in order to obtain still more minute information, he afterwards repeatedly revisited the place of discovery which is about 14 miles distant from Belleville, and can be reached after a short ride, the latter place being connected by railroad with East St. Louis. The removal of ground in extending a street disclosed the existence of the deposit, and Dr. Patrick derived all facts concerning its character from Mr. Sullivan, the contractor of the street work, who was present when the tools were exhumed, and therefore can be considered as a reliable authority. The results of my informant's inquiries, communicated in various letters addressed to me, are contained in the following account:

In the early part of December 1868, some laborers, while engaged in grading an extension of Sixth street in East St. Louis, came upon a deposit of Indian relics, consisting of flint tools, all of the hoe and shovel type, and of small fossil marine shells, partly pierced, and in quantity about equal to the contents of a bushel. Close by were found several boulders of flint and greenstone, weighing

* Some years ago I discovered near East St. Louis the traces of an Indian pottery, described in the Smithsonian report for 1866.

from 15 to 30 pounds each, and many fragments of flint. The soil in the immediate neighborhood is composed of black loam, overlying a stratum of a sandy character, and the deposit which occurred in the latter, was covered with from 18 to 24 inches of the black earth, bearing a luxuriant turf on its surface. According to the contractor's statement, the flint tools, the shells, and the boulders were deposited in three separate holes dug out in the sand, but not more than a foot apart from each other, and placed like the corners of a triangle. To use his language, the implements formed a "nest" by themselves, and so did the shells, and likewise the boulders. The flint tools, however, instead of being packed close together, like the shells and the boulders, were arranged with some regularity, overlapping each other or standing edgewise, and covering a circular space. The whole deposit did not extend more than seven or eight feet on either side. The contractor neglected to count the implements, but he thinks there were from 70 to 75 in all; some 50 hoes and about 20 shovels. No other stone articles, such as arrow and spear-heads, tomahawks, &c., had been deposited with the



agricultural implements. The latter were soon taken away by persons from the place, attracted by the novelty of the occurrence, and it is to be regretted that many, if not most of them, have fallen into the hands of individuals who are unable to appreciate their value. But this is usually the case when discoveries of similar character are made. Dr. Patrick examined upwards of 20 of the flint implements, and found that none of them had been used, as they had not received the slightest polish on the cutting edge.

The place of discovery lies about a mile and a half, or still further, from the Mississippi, on elevated ground, and above ordinary high-water mark; but formerly, before the bed of the river was narrowed by the dike connecting the Illinois shore with Bloody Island, the distance cannot have been more than half a mile. The spot is situated nearly midway between two mounds, half a mile apart from each other. One of them was formerly used as a graveyard by the French of the neighborhood, and the other serves as the substructure for a dwelling-house. The accompanying plan (furnished by my correspondent) gives a view of the locality.

Several of the agricultural implements found at East St. Louis are now in my possession. Their material is a yellowish-brown variety of the flint to which I already referred. In shape they correspond with the tools of the same class previously described by me; most of the shovels, however, instead of having the end opposite the cutting part worked into a rounded edge, (like Fig. 1,) terminate in a more or less acute angle. The edges of all are chipped with the utmost regularity, and exhibit not the slightest wear, which proves that the implements were in a perfectly new condition when buried in the ground.

The fossil shells of marine origin are all small univalves, and belong almost entirely to the genus *melampus*. Of nearly 300 specimens sent to me by Dr. Patrick, 19 only represent other genera, namely, *columbella*, *marginella*, *conus*,

and *bullæ*. All have a decayed and chalky appearance. They were probably obtained in the neighborhood, and obviously destined for ornamental purposes. This may be inferred from the fact that a number of the *melampus* shells are pierced with one hole in the lower part, (Fig. 3, natural size,) which was sufficient for stringing them, as the connecting thread could easily be passed through the natural aperture of the shell. On close examination I found that these shells had been reduced, by grinding, to greater thinness at the place of perforation, in order to facilitate the process of piercing.



The boulders, which formed a part of the deposit, were probably designated for the manufacture of implements. A piece of one of the boulders was sent to me for examination. It is a compact diorite, the material of which many ground articles of the North American Indians, such as tomahawks, chisels, pestles, &c., are made.

It would be useless to speculate on the antiquity of the objects thus accidentally discovered, for there are no indications for determining, even approximately, the period when they were buried. It is far easier to account for the motives which induced the owners of the tools and the other objects to dispose of them in the manner described. Their object was, in all probability, to *hide* them. Perhaps they left the place with a view to return and to take possession again of their concealed property, but were prevented from carrying out their intention. Or, they may have buried them in time of war, when they were killed, driven away, or led into captivity; and their "hidden treasure" lay undisturbed in the ground, perhaps for centuries, until the spade of the Irish laborer brought it to light again. There is no room whatever for the supposition that this deposit constituted one of those religious offerings by which the ancient inhabitants of the Mississippi valley believed they could gratify or propitiate the powers that ruled their destinies.

Similar deposits of flint articles have repeatedly been discovered in the United States,* and Messrs. Squier and Davis mention several instances of this kind in their work entitled "Ancient Monuments of the Mississippi Valley." The most extensive accumulation described by them occurred in one of the so-called sacrificial-mounds of "Clark's Work," on North Fork of Paint creek, Ross county, Ohio. This mound contained, instead of the altar usually found in this class of earth-structures, an enormous number of flint disks standing on their edges, and arranged in two layers one above the other, at the bottom of the mound. The whole extent of these layers has not been ascertained; but an excavation six feet long and four broad disclosed upwards of six hundred of those disks, rudely blocked out of a superior kind of grayish striped flint. I had occasion to examine the specimens formerly in the collection of Dr. Davis, and have now a number of them in my own collection, which were sent to me from Ohio. They are either roundish, oval, or heart-shaped, and of various sizes, but on an average six inches long, four inches wide, and from three-quarters of an inch to an inch in thickness. They weigh not far from two pounds each. These flint disks are believed to have been buried as a religious offering, and the peculiar structure of the mound which inclosed them† rather favors this view. The disks, however, represent no finished implements, but merely flat pieces, rudely chipped around their edges, and destined, in all probability, to be wrought into more symmetrical forms. Thus it would rather seem that the contents of this mound constituted a kind of depot or magazine, from which supplies of flint could be drawn whenever there was a want of that material. Many of the disks under notice bear a striking resemblance to the flint "hatchets" discovered by Boucher de Perthes and Dr. Rigollot in the diluvial gravels of the valley of the Somme,

* Also in Europe. Deposits of flint arrow-heads, for instance, were found in Scotland.—Logan, "The Scottish Gael." Lond., 1831., Vol. I, p. 339.

† Ancient Monuments, &c., p. 158; drawings of the disks on p. 214.

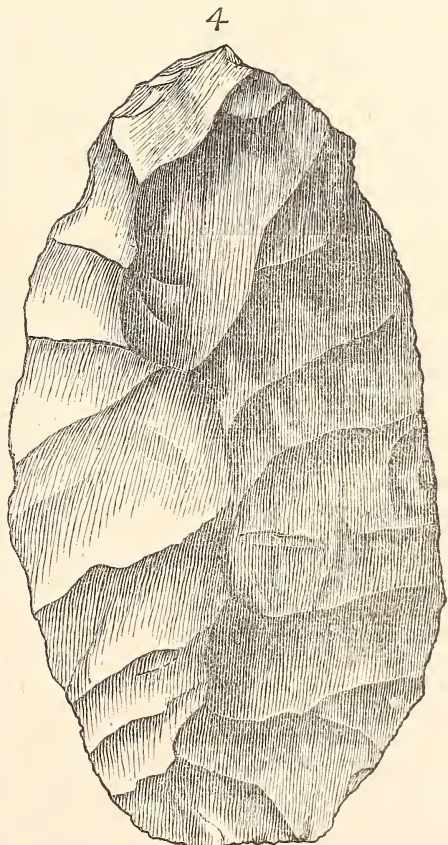
in northern France.* The similarity in form, however, is the only analogy that can be claimed for the rude flint articles of both continents, considering that they occurred under totally different circumstances. The drift implements of Europe represent the most primitive attempts of man in the art of working stone, while the Ohio disks are the unfinished specimens of a race that constructed earthworks of amazing size, and was already highly skilled in the manufacture of weapons and tools of flint.

Yet I little doubt but that implements analogous in shape as well as in associations to those of the drift of Europe, will be found also in America; for indications of the high antiquity of man on the latter continent are not wanting, and the similarity in the early condition of the human race in various parts of the globe becomes more and more manifest by the results of archæological investigation.

Another occurrence of flint disks is recorded in a notice by Dr. Hoy, published in Lapham's "Antiquities of Wisconsin," one of the Smithsonian volumes: "Some workmen, in digging a ditch through a peat swamp near Racine, found a deposit of disks of hornstone, about 30 in number. They were immediately on the clay, at the bottom of the peat, about two and a half feet below the surface. Some of the disks were quite regular; they vary from half a pound to a pound in weight." A few of these are preserved in the collection of the Smithsonian Institution.

About 1860, while I lived in St. Louis, a quantity of rudely-shaped flint articles of similar character were discovered close together on the bank of the Mississippi, between St. Louis and Carondelet. It is probable that the falling down of a part of the bank had exposed them to sight. I could not ascertain their number, but saw about eight of them, of which I obtained three. They are nearly all of the same size, oval in shape, and consist of whitish flint.

Fig. 4 represents one of my specimens in natural size. The original is seven-eighths of an inch thick in the middle part. It is evident that they are not implements in a state of completion, but roughly-edged fragments, which were destined to be made into



arrow and spear-heads at some future time. Their present convenient shape was doubtless given them for the sake of easier transportation and for saving space. It is believed that flint can be chipped more readily after having been exposed for some time to the humid influence of the earth, and this may partly account for the practice of the aborigines of burying their supplies of flint in suitable places.

* Implements very similar in shape to the Ohio disks were also found in the caves of Dordogne, especially that of Le Moustier. They are described and figured in the splendid work by Lartet and Christy, entitled "Reliquiæ Aquitanicæ."

Returning to my former subject, I will observe that the occurrence of Indian flint tools which served for agricultural purposes is not more surprising than that of other stone implements indicating less peaceable pursuits; for it is known that many of the aboriginal tribes of North America raised maize and other nutritious plants before this continent was settled by Europeans.* The production of maize, indeed, must have been considerable. Mr. Gallatin has taken some pains to ascertain the area, east of the Rocky Mountains, and north of Mexico, over which cultivation extended. It was bounded on the east by the Atlantic; on the south by the Gulf of Mexico; on the west by the Mississippi, or, more properly, by the prairies. Towards the north the limits varied according to the climate; but near the Atlantic the northern boundary of agriculture lay in the region of the rivers Kennebec and Penobscot. North of the Great Lakes agriculture was only found among the Hurons and some kindred tribes. The Ojibways, on the south of Lake Superior, and their neighbors, the Menomones, it appears, depended for vegetable food principally on the wild rice or wild oats, called *folle avoine* by the French.† The Iroquois tribes raised large quantities of Indian corn. In the year 1687, a corps under the command of the Marquis de Nonville made an invasion into the country of the Senecas, during which all their supplies of maize were either burned or otherwise spoiled, and the quantity thus destroyed is said to have amounted to 400,000 minots, or 1,200,000 bushels.‡ Though this estimate may be somewhat exaggerated, it nevertheless shows that these tribes paid much attention to the cultivation of maize.

The nations who inhabited the large territories formerly called Florida and Louisiana, probably obtained their food mostly from the vegetable kingdom. They cultivated chiefly maize, beans, peas, pumpkins, melons, and sweet potatoes. Maize, however, was their principal produce. In the accounts of De Soto's expedition, not only frequent allusion is made to the extensive maize fields of the natives, but it may also be gathered from these relations that the army of De Soto would have starved without the supplies of Indian corn obtained from the inhabitants. These people laid up stores of that useful cereal, and among other facts it is mentioned that one of De Soto's officers found in one house alone, five hundred measures of maize ground to meal, besides a large quantity in grain.§ But those southern tribes met by De Soto and his followers in the sixteenth century were the most advanced among the North American aborigines. No longer in the pure hunter state, but attached to the soil, they lived in large villages, consisting of dwellings more commodious than those of the ruder tribes, and paid generally more attention to the comforts of life than the latter.

Adair, who spent during the last century many years as a trader in the district under notice, mentions that the French of West Florida and the English colonists obtained from the Indians different sorts of beans and peas, with which they were before entirely unacquainted. They raised also a small kind of tobacco, differing from that in use among the French and English settlers. The women, he says, planted pumpkins and different species of melons in separate fields, at a considerable distance from the towns.|| It is even probable that the former inhabitants cultivated fruit trees. Bartram, at least, found in Georgia and Alabama, on the sites of ancient Indian settlements, various kinds of trees, such as

* Some of the facts mentioned in the following remarks were already given in my previous article, published in the Smithsonian report for 1863; I repeat them here, for the sake of greater completeness, in connection with some additional details bearing upon the same subject. For descriptions of the remarkable "garden-beds" of Michigan, Wisconsin, and Indiana, which indicate an ancient cultivation, I must refer to Schoolcraft, Lapham, and others.

† Gallatin, *Archæologia Americana*, Vol. II, p. 149.

‡ Documentary History of New York, Vol. I, p. 238.

§ Garcilasso de la Vega, *Conquête de la Floride*. Leyden, 1731, Vol. I, p. 250.

|| Adair, *History of the American Indians*. London, 1775, p. 408.

the persimmon, honey-locust, Chickasaw plum, mulberry, black walnut, and shell-barked hickory, which, he thinks, "were cultivated by the ancients on account of their fruit, as being wholesome and nourishing food."*

The Floridians, it is stated, employed at De Soto's time prisoners of war for working the fields, and in order to prevent their escape they partly maimed them by cutting the tendons of the leg above the heel or the instep.† It appears, however, that among most semi-agricultural tribes of North America field labor was imposed upon the women; while the men, when not engaged in hunting or war expeditions, abandoned themselves to that listless repose in which barbarians generally love to indulge.

**Bartram's Travels.* Dublin, 1793, p. 38.

†*Garcilasso de la Vega*, *Conquête de la Floride*, Vol. I, p. 286, and Vol. II, p. 389.









Deacidified using the Bookkeeper process.
Neutralizing agent: Magnesium Oxide
Treatment Date: March 2010

Preservation Technologies

A WORLD LEADER IN COLLECTIONS PRESERVATION

111 Thomson Park Drive
Cranberry Township, PA 16066
(724) 779-2111



DORRIS BROS.
LIBRARY BINDING

MAR 74

ST. AUGUSTINE

FLA.



32084

LIBRARY OF CONGRESS



0 024 426 732 4